REMARKS/ARGUMENTS

Applicants respectfully request reconsideration of the above-identified application.

In the outstanding Office action, the Examiner accepted Applicants' arguments previously presented regarding Asakura, Kompfner, and Essemlali and has withdrawn the previous rejection of the claims. A new ground of rejection has been entered. Specifically, claims 1, 17, and 32 now stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Asakura in view of newly cited U.S. Patent No. 4,528,448 issued July 9, 1985 to David E. Doggett ("Doggett").

Applicants respectfully submit that the combination of Asakura and Doggett does not render the claimed invention obvious. Asakura discloses an optical tap for selecting a particular wavelength from a multi-wavelength signal. The tap is designed for a telecommunications system having a particular configuration, namely, a single input fiber carrying a multi-wavelength signal and a pair of output fibers. One output fiber transmits the selected wavelength, while the second output fiber transmits all the remaining wavelengths from the input fiber. In order to pick off the desired signal, Asakura utilizes a diffraction grating to disperse the input signal into its component wavelengths. A reflective mirror directs the remaining or unselected wavelengths to an output fiber. The selected signal is directed to a second diffraction grating that directs the selected signal to the other output fiber. Asakura discloses other embodiments utilizing one or more diffraction gratings and one or more reflective mirrors, but the end result is always a single wavelength selected and transmitted to an output fiber with all other wavelengths directed to a second output fiber.

The Examiner acknowledges that in Asakura's optical tap the diffraction grating(s) are fixed and do not move. The Examiner also acknowledges that Asakura does not disclose a "holographic diffraction grating including an array of superimposed facets, each of said facets carrying a diffraction grating(s) which are superimposed, each diffraction grating being angularly offset with respect to each other." The Examiner cites Doggett to over these deficiencies in Asakura.

Doggett discloses a device for optically decoding the angular position of a rotating shaft in a mechanical system. Doggett's device includes a monochromatic light source, a disk bearing a plurality of diffraction gratings which is affixed to the rotating shaft of a motor, and a light detector. As the disk rotates with the rotation of the motor shaft, light from the source is diffracted from the disk to the detector. The detected light indicates the

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position of the motor shaft at any given time. The diffraction gratings on the disk may be positioned adjacent one another or may be holographically superimposed on the surface of the disk.

Applicants did not invent a holographic diffraction grating including an array of superimposed facets. It is the use of such an element in a telecommunications application that is unique. Applicants recognized that by using such a holographic diffraction grating, one could easily and efficiently distribute signals from a plurality of inputs to a plurality of outputs.

In considering the combination of Asakura and Doggett, it should be noted that Doggett is not addressed to a telecommunications application. Rather than distributing optical signals, Doggett deals with encoding the angular position of a rotating shaft. It clearly is outside the field of applicants' invention and represents non-analogous prior art. Even if it were reasonable to assume that skilled artisan would look to Doggett to solve the problem of distributing optical signal, the combination of Doggett and Asakura does not disclose the claimed invention. In particular, substituting the disk of Doggett for that of Asakura would render the Asakura device inoperable.

Asakura's optical tap is designed to be used with a diffraction grating having a particular grating spacing and fixed spatial location. The remaining elements, namely, the fibers and reflecting mirror(s), are spatially oriented about the diffraction grating to properly distribute to signals to the two output fibers. If one were to replace Asakura's fixed diffraction grating with Doggett's holographic disk, the remaining elements would not be properly positioned for any diffraction grating spacing other than the one for which the system was initially designed. In view of that fact, there is no motivation to make the substitution. The system geometry would have to be changed for each new grating spacing. The position of the fibers would have to be adjusted as would the lateral position of the reflecting mirror.

One of the important aspects of the present invention is its ability to "distribute any said output optical signal(s) to any said output station(s)." In order to do this, one must be able to control the position of the holographic diffraction grating. As described in the specification, Applicants' invention can perform this function, for example, using a stepper motor and associating each diffraction grating spacing with a particular position of the stepper motor. The stepper motor then may be rotated back and forth to select the desired input to output configuration. Asakura teaches only a fixed diffraction grating, and

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Doggett teaches a disk rotating continuously in a single direction. Combining Asakura and Doggett, thus, would not reasonably suggest distributing optical signals as claimed.

Claim 3, dependent on claim 1, stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Asakura and Doggett and further in view of previously cited May. May does not overcome the deficiencies of Asakura and Doggett. Claim 3 should be considered patentable for the reasons given above in connection with claim 1.

In view of the above, Applicants respectfully requests that the pending claims be considered patentable and a Notice of Allowance issued.

Respectfully submitted,

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